

Statement of Basis of the Federal Operating Permit

Lone Star NGL Fractionators LLC

Site Name: Mont Belvieu Gas Plant
Area Name: Mont Belvieu Gas Plant (FRAC I & II)
Physical Location: 9850 FM 1942
Nearest City: Baytown
County: Chambers

Permit Number: O3586
Project Type: Renewal

The North American Industry Classification System (NAICS) Code: 211112
NAICS Name: Natural Gas Liquid Extraction

This Statement of Basis sets forth the legal and factual basis for the draft permit conditions in accordance with 30 TAC §122.201(a)(4). Per 30 TAC §§ 122.241 and 243, the permit holder has submitted an application under § 122.134 for permit renewal. This document may include the following information:

- A description of the facility/area process description;
- A basis for applying permit shields;
- A list of the federal regulatory applicability determinations;
- A table listing the determination of applicable requirements;
- A list of the New Source Review Requirements;
- The rationale for periodic monitoring methods selected;
- The rationale for compliance assurance methods selected;
- A compliance status; and
- A list of available unit attribute forms.

Prepared on: June 18, 2019

Operating Permit Basis of Determination

Permit Area Process Description

The plant contains operationally independent fractionation plants that treat Y-grade natural gas liquids, separating the liquids into constituent gas and liquid products. Natural gas feed enters the plant and passes through a closed loop amine unit. The unit uses amine contactors to remove CO₂ and H₂S from the natural gas stream. The saturated rich amine enters a flash tank where gaseous vapors are flashed and sent to a thermal oxidizer for combustion. The liquid portion from the amine flash tank is routed to an amine regenerator, where heat from the plant's heating oil system volatilizes the remaining CO₂, H₂S, and VOC from the rich amine stream. The lean amine is returned to the amine contactors for reuse while the waste gas from the amine regenerator is routed to the thermal oxidizer for combustion of H₂S and VOC.

From the amine unit, the natural gas is routed through a molecular sieve dehydration unit where the water content in the natural gas is reduced. A regeneration heater heats a small amount of natural gas that is slip-streamed as needed to regenerate the sieve beds. All gas is routed back into the system inlet. There are two beds in the molecular sieve design and only one bed is regenerated at a time. The molecular sieve unit does not have vents to the atmosphere and wet gas from the regenerated bed is routed back to the system.

Natural gas leaving the dehydration unit is fed to a series of trayed columns for separation into constituent product gases. The column contains a reboiler located at the bottom of the column that is heated by the plant's heating oil system. As natural gas enters the column in the middle, the reboiler vaporizes a portion of the feed to produce stripping vapors rising inside the column. This stripping vapor rises up through the column contacting down-flowing liquids allowing for the fractionation of the liquids. Vapor leaving the top of the column enters a condenser where heat is removed by a cooling medium and the vapor condensed. Liquid is returned to the column as reflux to limit the loss of heavy components overhead. The product leaving the lower part of the column has the highest boiling point, whereas the hydrocarbon leaving the top of the column has the lowest boiling point. The separated streams are sent via pipeline to off-site storage for pending sale to customers.

FOPs at Site

The "application area" consists of the emission units and that portion of the site included in the application and this permit. Multiple FOPs may be issued to a site in accordance with 30 TAC § 122.201(e). When there is only one area for the site, then the application information and permit will include all units at the site. Additional FOPs that exist at the site, if any, are listed below.

Additional FOPs: O3838

Major Source Pollutants

The table below specifies the pollutants for which the site is a major source:

Major Pollutants	VOC, NOx, CO
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Reading State of Texas' Federal Operating Permit

The Title V Federal Operating Permit (FOP) lists all state and federal air emission regulations and New Source Review (NSR) authorizations (collectively known as "applicable requirements") that apply at a particular site or permit area (in the event a site has multiple FOPs). **The FOP does not authorize new emissions or new construction activities.** The FOP begins with an introductory page which is common to all Title V permits. This page gives the details of the company, states the authority of the issuing agency, requires the company to operate in accordance with this permit and 30 Texas Administrative Code (TAC) Chapter 122, requires adherence with NSR requirements of 30 TAC Chapter 116, and finally indicates the permit number and the issuance date.

This is followed by the table of contents, which is generally composed of the following elements. Not all permits will have all of the elements.

- General Terms and Conditions
- Special Terms and Conditions
 - Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting
 - Additional Monitoring Requirements
 - New Source Review Authorization Requirements
 - Compliance Requirements
 - Protection of Stratosphere Ozone
 - Permit Location
 - Permit Shield (30 TAC § 122.148)
- Attachments
 - Applicable Requirements Summary
 - Unit Summary
 - Applicable Requirements Summary
 - Additional Monitoring Requirements
 - Permit Shield
 - New Source Review Authorization References
 - Compliance Plan
 - Alternative Requirements
- Appendix A
 - Acronym list

General Terms and Conditions

The General Terms and Conditions are the same and appear in all permits. The first paragraph lists the specific citations for 30 TAC Chapter 122 requirements that apply to all Title V permit holders. The second paragraph describes the requirements for record retention. The third paragraph provides details for voiding the permit, if applicable. The fourth paragraph states that the permit holder shall comply with the requirements of 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit. The fifth paragraph provides details on submission of reports required by the permit.

Special Terms and Conditions

Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting. The TCEQ has designated certain applicable requirements as site-wide requirements. A site-wide requirement is a requirement that applies uniformly to all the units or activities at the site. Units with only site-wide requirements are addressed on Form OP-REQ1 and are not required to be listed separately on a OP-UA Form or Form OP-SUM. Form OP-SUM must list all units addressed in the application and provide identifying information, applicable OP-UA Forms, and preconstruction authorizations. The various OP-UA Forms provide the characteristics of each unit from which applicable requirements are established. Some exceptions exist as a few units may have both site-wide requirements and unit specific requirements.

Other conditions. The other entries under special terms and conditions are in general terms referring to compliance with the more detailed data listed in the attachments.

Attachments

Applicable Requirements Summary. The first attachment, the Applicable Requirements Summary, has two tables, addressing unit specific requirements. The first table, the Unit Summary, includes a list of units with applicable requirements, the unit type, the applicable regulation, and the requirement driver. The intent of the requirement driver is to inform the reader that a given unit may have several different operating scenarios and the differences between those operating scenarios.

The applicable requirements summary table provides the detailed citations of the rules that apply to the various units. For each unit and operating scenario, there is an added modifier called the “index number,” detailed citations specifying

monitoring and testing requirements, recordkeeping requirements, and reporting requirements. The data for this table are based on data supplied by the applicant on the OP-SUM and various OP-UA forms.

Additional Monitoring Requirement. The next attachment includes additional monitoring the applicant must perform to ensure compliance with the applicable standard. Compliance assurance monitoring (CAM) is often required to provide a reasonable assurance of compliance with applicable emission limitations/standards for large emission units that use control devices to achieve compliance with applicant requirements. When necessary, periodic monitoring (PM) requirements are specified for certain parameters (i.e. feed rates, flow rates, temperature, fuel type and consumption, etc.) to determine if a term and condition or emission unit is operating within specified limits to control emissions. These additional monitoring approaches may be required for two reasons. First, the applicable rules do not adequately specify monitoring requirements (exception- Maximum Achievable Control Technology Standards (MACTs) generally have sufficient monitoring), and second, monitoring may be required to fill gaps in the monitoring requirements of certain applicable requirements. In situations where the NSR permit is the applicable requirement requiring extra monitoring for a specific emission unit, the preferred solution is to have the monitoring requirements in the NSR permit updated so that all NSR requirements are consolidated in the NSR permit.

Permit Shield. A permit may or may not have a permit shield, depending on whether an applicant has applied for, and justified the granting of, a permit shield. A permit shield is a special condition included in the permit document stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirement(s) or specified applicable state-only requirement(s).

New Source Review Authorization References. All activities which are related to emissions in the state of Texas must have a NSR authorization prior to beginning construction. This section lists all units in the permit and the NSR authorization that allowed the unit to be constructed or modified. Units that do not have unit specific applicable requirements other than the NSR authorization do not need to be listed in this attachment. While NSR permits are not physically a part of the Title V permit, they are legally incorporated into the Title V permit by reference. Those NSR permits whose emissions exceed certain PSD/NA thresholds must also undergo a Federal review of federally regulated pollutants in addition to review for state regulated pollutants.

Compliance Plan. A permit may have a compliance schedule attachment for listing corrective actions plans for any emission unit that is out of compliance with an applicable requirement.

Alternative Requirements. This attachment will list any alternative monitoring plans or alternative means of compliance for applicable requirements that have been approved by the EPA Administrator and/or the TCEQ Executive Director.

Appendix A

Acronym list. This attachment lists the common acronyms used when discussing the FOPs.

Stationary vents subject to 30 TAC Chapter 111, Subchapter A, § 111.111(a)(1)(B) addressed in the Special Terms and Conditions

The site contains stationary vents with a flowrate less than 100,000 actual cubic feet per minute (acfm) and constructed after January 31, 1972 which are limited, over a six-minute average, to 20% opacity as required by 30 TAC § 111.111(a)(1)(B). As a site may have a large number of stationary vents that fall into this category, they are not required to be listed individually in the permit's Applicable Requirement Summary. This is consistent with EPA's White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995, that states that requirements that apply identically to emission units at a site can be treated on a generic basis such as source-wide opacity limits.

Periodic monitoring is specified in Special Term and Condition 3 for stationary vents subject to 30 TAC § 111.111(a)(1)(B) to verify compliance with the 20% opacity limit. These vents are not expected to produce visible emissions during normal operation. The TCEQ evaluated the probability of these sources violating the opacity standards and determined that there is a very low potential that an opacity standard would be exceeded. It was determined that continuous monitoring for these sources is not warranted as there would be very limited environmental benefit in continuously monitoring sources that have a low potential to produce visible emissions. Therefore, the TCEQ set the visible observation monitoring frequency for these sources to once per calendar quarter.

The TCEQ has exempted vents that are not capable of producing visible emissions from periodic monitoring requirements. These vents include sources of colorless VOCs, non-fuming liquids, and other materials that cannot produce emissions that obstruct the transmission of light. Passive ventilation vents, such as plumbing vents, are also included in this category. Since this category of vents are not capable of producing opacity due to the physical or chemical characteristics of the emission source, periodic monitoring is not required as it would not yield any additional data to assure compliance with the 20% opacity standard of 30 TAC § 111.111(a)(1)(B).

In the event that visible emissions are detected, either through the quarterly observation or other credible evidence, such as observations from company personnel, the permit holder shall either report a deviation or perform a Test Method 9 observation to determine the opacity consistent with the 6-minute averaging time specified in 30 TAC § 111.111(a)(1)(B). An additional provision is included to monitor combustion sources more frequently than quarterly if alternate fuels are burned for periods greater than 24 consecutive hours. This will address possible emissions that may arise when switching fuel types.

Stationary Vents subject to 30 TAC Chapter 111 not addressed in the Special Terms and Conditions

All other stationary vents subject to 30 TAC Chapter 111 not covered in the Special Terms and Conditions are listed in the permit's Applicable Requirement Summary. The basis for the applicability determinations for these vents are listed in the Determination of Applicable Requirements table.

Federal Regulatory Applicability Determinations

The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

Regulatory Program	Applicability (Yes/No)
Prevention of Significant Deterioration (PSD)	No
Nonattainment New Source Review (NNSR)	No
Minor NSR	Yes
40 CFR Part 60 - New Source Performance Standards	Yes
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)	No
40 CFR Part 63 - NESHAPs for Source Categories	Yes
Title IV (Acid Rain) of the Clean Air Act (CAA)	No
Title V (Federal Operating Permits) of the CAA	Yes
Title VI (Stratospheric Ozone Protection) of the CAA	Yes
CSAPR (Cross-State Air Pollution Rule)	No
Federal Implementation Plan for Regional Haze (Texas SO ₂ Trading Program)	No

Basis for Applying Permit Shields

An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the "Permit Shield" attachment of the permit.

Insignificant Activities

In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OP-REQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

1. Office activities such as photocopying, blueprint copying, and photographic processes.
2. Sanitary sewage collection and treatment facilities other than those used to incinerate wastewater treatment plant sludge. Stacks or vents for sanitary sewer plumbing traps are also included.
3. Food preparation facilities including, but not limited to, restaurants and cafeterias used for preparing food or beverages primarily for consumption on the premises.
4. Outdoor barbecue pits, campfires, and fireplaces.
5. Laundry dryers, extractors, and tumblers processing bedding, clothing, or other fabric items generated primarily at the premises. This does not include emissions from dry cleaning systems using perchloroethylene or petroleum solvents.
6. Facilities storing only dry, sweet natural gas, including natural gas pressure regulator vents.
7. Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.
8. Storage and handling of sealed portable containers, cylinders, or sealed drums.
9. Vehicle exhaust from maintenance or repair shops.
10. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
11. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
12. Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
13. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
14. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
15. Well cellars.
16. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
17. Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal.
18. Equipment used exclusively for the melting or application of wax.
19. All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
20. Shell core and shell mold manufacturing machines.
21. Sand or investment molds with a capacity of 100 lbs. or less used for the casting of metals;
22. Equipment used for inspection of metal products.
23. Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.

24. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.
25. Battery recharging areas.
26. Brazing, soldering, or welding equipment.

Determination of Applicable Requirements

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at www.tceq.texas.gov/permitting/air/nav/air_all_ua_forms.html.

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc.. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled "Basis of Determination." Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at www.tceq.texas.gov/permitting/air/nav/air_supportsys.html. The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column "Changes and Exceptions to RRT." If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word "None" will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled "Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected."

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled "Basis for Applying Permit Shields" specifies which units, if any, have a permit shield.

Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.

Determination of Applicable Requirements

Unit ID	Regulation	Index Number	Basis of Determination*
1PM18.044	30 TAC Chapter 117, Subchapter B	117B-1	Type of Service = New, modified, reconstructed or relocated diesel fuel-fired engine, placed into service on or after October 1, 2001, located in the Houston/Galveston/Brazoria ozone nonattainment area, operated less than 100 hours/year, on a rolling 12-month average
1PM18.044	40 CFR Part 60, Subpart IIII	60IIII-1	<p>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</p> <p>Diesel = Diesel fuel is used.</p> <p>Kilowatts = Power rating is greater than or equal to 130 KW and less than or equal to 368 KW.</p> <p>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</p> <p>Displacement = Displacement is less than 10 liters per cylinder.</p> <p>Service = CI ICE is a fire-pump engine, an emergency engine certified to National Fire Protection Association requirements.</p> <p>Standards = The emergency CI ICE does not meet the standards applicable to non-emergency engines.</p> <p>Commencing = CI ICE was newly constructed after 07/11/2005.</p> <p>Compliance Option = The CI ICE and control device is installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions.</p> <p>Manufacture Date = Date of manufacture was after 07/01/2006.</p> <p>Model Year = CI ICE was manufactured in model year 2009.</p> <p>Options = The CI ICE rated speed is greater than 2650 RPMs but is not complying with the previous model year's emission limits.</p>
1PM18.044	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-1	<p>HAP Source = The site is an area source of hazardous air pollutants as defined in 40 CFR § 63.2</p> <p>Brake HP = Stationary RICE with a brake HP greater than or equal to 300 HP and less than or equal to 500 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</p>
GRP-ENGINES1	30 TAC Chapter 117, Subchapter B	117B-1	Type of Service = New, modified, reconstructed or relocated diesel fuel-fired engine, placed into service on or after October 1, 2001, located in the Houston/Galveston/Brazoria ozone nonattainment area, operated less than 100 hours/year, on a rolling 12-month average
GRP-ENGINES1	40 CFR Part 60, Subpart IIII	60IIII-1	<p>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</p> <p>Diesel = Diesel fuel is used.</p> <p>Kilowatts = Power rating greater than or equal to 130 KW and less than or equal to 368 KW.</p> <p>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</p> <p>Displacement = Displacement is less than 10 liters per cylinder.</p> <p>Service = CI ICE is an emergency engine.</p> <p>Standards = The emergency CI ICE does not meet the standards applicable to non-emergency engines.</p> <p>Commencing = CI ICE was newly constructed after 07/11/2005.</p> <p>Compliance Option = The CI ICE and control device is installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions.</p> <p>Manufacture Date = Date of manufacture was after 04/01/2006.</p> <p>Model Year = CI ICE was manufactured in model year 2010.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
GRP-ENGINES1	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-1	HAP Source = The site is an area source of hazardous air pollutants as defined in 40 CFR § 63.2 Brake HP = Stationary RICE with a brake HP greater than or equal to 300 HP and less than or equal to 500 HP. Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.
GRP-TANKS1	30 TAC Chapter 115, Storage of VOCs	115B-1	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is less than or equal to 1,000 gallons
GRP-TANKS1	40 CFR Part 60, Subpart Kb	60Kb-1	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is less than 10,600 gallons (40,000 liters)
GRP-TANKS2	30 TAC Chapter 115, Storage of VOCs	115B-1	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank does not require emission controls Product Stored = VOC other than crude oil or condensate True Vapor Pressure = True vapor pressure is less than 1.0 psia Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons
GRP-TANKS2	40 CFR Part 60, Subpart Kb	60Kb-1	Product Stored = Volatile organic liquid Storage Capacity = Capacity is less than 10,600 gallons (40,000 liters)
GRP-TANKS3	30 TAC Chapter 115, Storage of VOCs	115B-1	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank does not require emission controls Product Stored = VOC other than crude oil or condensate True Vapor Pressure = True vapor pressure is less than 1.0 psia Storage Capacity = Capacity is greater than 25,000 gallons but less than or equal to 40,000 gallons
GRP-TANKS3	40 CFR Part 60, Subpart Kb	60Kb-1	Product Stored = Volatile organic liquid Storage Capacity = Capacity is greater than or equal to 19,800 gallons (75,000 liters) but less than 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 2.2 psia
GRP-TANKS4	30 TAC Chapter 115, Storage of VOCs	115B-1	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank does not require emission controls Product Stored = VOC other than crude oil or condensate True Vapor Pressure = True vapor pressure is less than 1.0 psia Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons

Unit ID	Regulation	Index Number	Basis of Determination*
GRP-TANKS4	40 CFR Part 60, Subpart Kb	60Kb-1	Product Stored = Volatile organic liquid Storage Capacity = Capacity is greater than or equal to 10,600 gallons (40,000 liters) but less than 19,800 gallons (75,000 liters)
2.5SV19.006L	30 TAC Chapter 115, Loading and Unloading of VOC	115C-1	Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal. Alternate Control Requirement (ACR) = No alternate control requirements are being utilized. Product Transferred = Volatile organic compounds other than liquefied petroleum gas and gasoline. Transfer Type = Loading and unloading. True Vapor Pressure = True vapor pressure less than 0.5 psia.
2.5SV19.006L	30 TAC Chapter 115, Loading and Unloading of VOC	115C-2	Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal. Alternate Control Requirement (ACR) = No alternate control requirements are being utilized. Product Transferred = Volatile organic compounds other than liquefied petroleum gas and gasoline. Transfer Type = Loading and unloading. True Vapor Pressure = True vapor pressure greater than or equal to 0.5 psia. Daily Throughput = Loading less than 20,000 gallons per day.
GEN-LOAD	30 TAC Chapter 115, Loading and Unloading of VOC	115C-1	Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal. Alternate Control Requirement (ACR) = No alternate control requirements are being utilized. Product Transferred = Volatile organic compounds other than liquefied petroleum gas and gasoline. Transfer Type = Loading and unloading. True Vapor Pressure = True vapor pressure less than 0.5 psia.
GRP-SLOP	30 TAC Chapter 115, Loading and Unloading of VOC	115C-1	Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal. Alternate Control Requirement (ACR) = No alternate control requirements are being utilized. Product Transferred = Volatile organic compounds other than liquefied petroleum gas and gasoline. Transfer Type = Only unloading. True Vapor Pressure = True vapor pressure less than 0.5 psia.
GRP-OILHTRS	30 TAC Chapter 117, Subchapter B	117B-1	Diluent CEMS = The process heater does not use a carbon dioxide CEMS to monitor diluent. Fuel Flow Monitoring = Unit vents to a common stack with a NO _x and diluent CEMS and utilizes a single totalizing fuel flow meter per 30 TAC §§ 117.140(a)(2)(B), 117.340(a)(2)(B) or 117.440(a)(2)(B). Unit Type = Process heater CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option Maximum Rated Capacity = Maximum rated capacity is at least 200 MMBtu/hr. CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1).

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average</p> <p>NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2)</p> <p>NOx Reduction = Post combustion control technique with ammonia injection</p> <p>Fuel Type #1 = Natural gas</p> <p>NH3 Monitoring = Stain tube.</p> <p>NOx Monitoring System = Continuous emissions monitoring system</p> <p>Annual Heat Input = Annual heat input is greater than 2.2(10¹¹) Btu/yr, based on a rolling 12-month average.</p> <p>NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)</p>
GRP-OILHTRS	30 TAC Chapter 117, Subchapter B	117B-2	<p>Diluent CEMS = The process heater does not use a carbon dioxide CEMS to monitor diluent.</p> <p>Fuel Flow Monitoring = Unit vents to a common stack with a NO_x and diluent CEMS and utilizes a single totalizing fuel flow meter per 30 TAC §§ 117.140(a)(2)(B), 117.340(a)(2)(B) or 117.440(a)(2)(B).</p> <p>Unit Type = Process heater</p> <p>CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option</p> <p>Maximum Rated Capacity = Maximum rated capacity is at least 200 MMBtu/hr.</p> <p>CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1).</p> <p>NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average</p> <p>NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2)</p> <p>NOx Reduction = Post combustion control technique with ammonia injection</p> <p>Fuel Type #1 = Gaseous fuel other than natural gas, landfill gas, or renewable non-fossil fuel gases.</p> <p>NH3 Monitoring = Stain tube.</p> <p>NOx Monitoring System = Continuous emissions monitoring system</p> <p>Annual Heat Input = Annual heat input is greater than 2.2(10¹¹) Btu/yr, based on a rolling 12-month average.</p> <p>NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)</p>
GRP-REGENHTRS	30 TAC Chapter 117, Subchapter B	117B-1	<p>Diluent CEMS = The process heater operates with a carbon dioxide CEMS to monitor diluent.</p> <p>Fuel Flow Monitoring = Unit vents to a common stack with a NO_x and diluent CEMS and utilizes a single totalizing fuel flow meter per 30 TAC §§ 117.140(a)(2)(B), 117.340(a)(2)(B) or 117.440(a)(2)(B).</p> <p>Unit Type = Process heater</p> <p>CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option</p> <p>Maximum Rated Capacity = Maximum rated capacity is at least 40 MMBtu/hr, but less than 100 MMBtu/hr.</p> <p>CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1).</p> <p>NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average</p> <p>NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2)</p> <p>NOx Reduction = Post combustion control technique with ammonia injection</p> <p>Fuel Type #1 = Natural gas</p> <p>NH3 Monitoring = Stain tube.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>NOx Monitoring System = Continuous emissions monitoring system</p> <p>Annual Heat Input = Annual heat input is greater than 2.8(10¹¹) Btu/yr, based on a rolling 12-month average.</p> <p>NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)</p>
GRP-REGENHTRS	30 TAC Chapter 117, Subchapter B	117B-2	<p>Diluent CEMS = The process heater operates with a carbon dioxide CEMS to monitor diluent.</p> <p>Fuel Flow Monitoring = Unit vents to a common stack with a NO_x and diluent CEMS and utilizes a single totalizing fuel flow meter per 30 TAC §§ 117.140(a)(2)(B), 117.340(a)(2)(B) or 117.440(a)(2)(B).</p> <p>Unit Type = Process heater</p> <p>CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option</p> <p>Maximum Rated Capacity = Maximum rated capacity is at least 40 MMBtu/hr, but less than 100 MMBtu/hr.</p> <p>CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1).</p> <p>NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average</p> <p>NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2)</p> <p>NOx Reduction = Post combustion control technique with ammonia injection</p> <p>Fuel Type #1 = Gaseous fuel other than natural gas, landfill gas, or renewable non-fossil fuel gases.</p> <p>NH3 Monitoring = Stain tube.</p> <p>NOx Monitoring System = Continuous emissions monitoring system</p> <p>Annual Heat Input = Annual heat input is greater than 2.8(10¹¹) Btu/yr, based on a rolling 12-month average.</p> <p>NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)</p>
GRP-OILHTRS	40 CFR Part 60, Subpart Db	60Db-1	<p>60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption applies.</p> <p>Construction/Modification Date = Constructed or reconstructed after February 28, 2005.</p> <p>D-Series Fuel Type #1 = Natural gas.</p> <p>Heat Input Capacity = Heat input capacity is greater than 250 MMBtu/hr (73 MW).</p> <p>PM Monitoring Type = No particulate monitoring.</p> <p>Opacity Monitoring Type = No particulate (opacity) monitoring.</p> <p>Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da.</p> <p>Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281.</p> <p>NOx Monitoring Type = Continuous emission monitoring system.</p> <p>Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical.</p> <p>SO2 Monitoring Type = Fuel certification (maintaining receipts per § 60.49b(r)(1)).</p> <p>Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA.</p> <p>Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J.</p> <p>Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK.</p> <p>Technology Type = Other conventional technology.</p> <p>ACF Option - SO2 = Other ACF or no ACF.</p> <p>Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines.</p> <p>Unit Type = OTHER UNIT TYPE</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft³.</p> <p>60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative.</p> <p>ACF Option - NOx = Other ACF or no ACF.</p> <p>60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.</p>
GRP-OILHTRS	40 CFR Part 60, Subpart Db	60Db-2	<p>60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption applies.</p> <p>Construction/Modification Date = Constructed or reconstructed after February 28, 2005.</p> <p>D-Series Fuel Type #1 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.</p> <p>Heat Input Capacity = Heat input capacity is greater than 250 MMBtu/hr (73 MW).</p> <p>PM Monitoring Type = No particulate monitoring.</p> <p>Opacity Monitoring Type = No particulate (opacity) monitoring.</p> <p>Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da.</p> <p>Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281.</p> <p>NOx Monitoring Type = Continuous emission monitoring system.</p> <p>Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical.</p> <p>SO2 Monitoring Type = Fuel certification (maintaining receipts per § 60.49b(r)(1)).</p> <p>Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA.</p> <p>Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J.</p> <p>Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E.</p> <p>Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK.</p> <p>Technology Type = Other conventional technology.</p> <p>ACF Option - SO2 = Other ACF or no ACF.</p> <p>Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines.</p> <p>Unit Type = OTHER UNIT TYPE</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft³.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative.</p> <p>ACF Option - NOx = Other ACF or no ACF.</p> <p>60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.</p>
GRP-REGENHTRS	40 CFR Part 60, Subpart Dc	60Dc-1	<p>Construction/Modification Date = After February 28, 2005.</p> <p>PM Monitoring Type = No particulate monitoring.</p> <p>Maximum Design Heat Input Capacity = Maximum design heat input capacity is greater than or equal to 10 MMBtu/hr (2.9 MW) but less than or equal to 100 MMBtu (29 MW).</p> <p>SO2 Inlet Monitoring Type = Fuel certification (or maintaining receipts).</p> <p>Other Subparts = The facility is not covered under 40 CFR Part 60, Subparts AAAA or KKKK, or under an approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart BBBB.</p> <p>SO2 Outlet Monitoring Type = No SO₂ monitoring.</p> <p>Heat Input Capacity = Heat input capacity is greater than or equal to 30 MMBtu/hr (8.7 MW) but less than or equal to 75 MMBtu/hr (22 MW).</p> <p>Technology Type = None.</p> <p>D-Series Fuel Type = Natural gas.</p> <p>ACF Option - SO2 = Other ACF or no ACF.</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>30% Coal Duct Burner = The facility does not combust coal in a duct burner as part of a combined cycle system; or more than 30% of the heat is from combustion of coal and less than 70% is from exhaust gases entering the duct burner.</p>
GRP-REGENHTRS	40 CFR Part 60, Subpart Dc	60Dc-2	<p>Construction/Modification Date = After February 28, 2005.</p> <p>PM Monitoring Type = No particulate monitoring.</p> <p>Maximum Design Heat Input Capacity = Maximum design heat input capacity is greater than or equal to 10 MMBtu/hr (2.9 MW) but less than or equal to 100 MMBtu (29 MW).</p> <p>SO2 Inlet Monitoring Type = Fuel certification (or maintaining receipts).</p> <p>Other Subparts = The facility is not covered under 40 CFR Part 60, Subparts AAAA or KKKK, or under an approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart BBBB.</p> <p>SO2 Outlet Monitoring Type = No SO₂ monitoring.</p> <p>Heat Input Capacity = Heat input capacity is greater than or equal to 30 MMBtu/hr (8.7 MW) but less than or equal to 75 MMBtu/hr (22 MW).</p> <p>Technology Type = None.</p> <p>D-Series Fuel Type = Other fuel.</p> <p>ACF Option - SO2 = Other ACF or no ACF.</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>30% Coal Duct Burner = The facility does not combust coal in a duct burner as part of a combined cycle system; or more than 30% of the heat is from combustion of coal and less than 70% is from exhaust gases entering the duct burner.</p>
1SK25.001	30 TAC Chapter 111, Visible Emissions	111A-1	<p>Acid Gases Only = Flare is not used only as an acid gas flare as defined in 30 TAC § 101.1.</p> <p>Emergency/Upset Conditions Only = Flare is used under conditions other than emergency or upset conditions.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
1SK25.001	30 TAC Chapter 115, HRVOC Vent Gas	115H-1	<p>Monitoring Requirements = Flare is complying with the continuous monitoring requirements of § 115.725(d).</p> <p>Out of Service = Flare was not permanently out of service by April 1, 2006.</p> <p>Total Gas Stream = Flare receives a total gas stream with greater than 100 ppmv HRVOC at some time.</p> <p>Gas Stream Concentration = Flare receives a gas stream containing 5% or greater HRVOC by weight at some time.</p> <p>Alternative Monitoring = No alternative monitoring and test methods are used.</p> <p>Minor Modification = No minor modifications to the monitoring and test methods are used.</p> <p>Tank Service = Flare is not in dedicated service for storage tanks with 95% or greater of an individual HRVOC.</p> <p>Flare Type = Flare is in multi-purpose service.</p>
1SK25.001	40 CFR Part 60, Subpart A	60A-1	Subject to 40 CFR § 60.18 = Flare is not subject to 40 CFR § 60.18.
1SK25.001	40 CFR Part 63, Subpart A	63A-1	Required Under 40 CFR Part 63 = Flare is not required by a Subpart under 40 CFR Part 63.
GRP-AMINE	30 TAC Chapter 112, Sulfur Compounds	112A-1	Sulfur Recovery Plant = The gas sweetening unit is not using sulfur recovery.
GRP-AMINE	40 CFR Part 60, Subpart LLL	60LLL-1	<p>Onshore = The sweetening unit is located onshore at a gas processing plant.</p> <p>Construction Date = After August 23, 2011.</p>
GRP-FUGS	30 TAC Chapter 115, HRVOC Fugitive Emissions	115H-1	<p>Agitators = The fugitive unit does not contain agitators.</p> <p>Alternative Work Practice in § 115.358 = No components are complying with the alternative work practice requirements in 30 TAC § 115.358.</p> <p>Compressor Seals = The fugitive unit contains compressor seals.</p> <p>Open-ended Valves or Lines = The fugitive unit does not contain open-ended valves or lines.</p> <p>Process Drains = The fugitive unit does not contain process drains.</p> <p>Title 30 TAC §115.780 Applicable = The fugitive unit contains a defined process and Highly Reactive VOC.</p> <p>Valves (not pressure relief, open-ended or bypass line valves) = The fugitive unit contains valves other than pressure relief, open-ended or bypass line valves.</p> <p>ACR = No compressor seals are complying with an alternate control requirement.</p> <p>Less Than 250 Components at Site = The fugitive unit is located at a site with at least 250 fugitive components in VOC service.</p> <p>Weight Percent HRVOC = Components in the fugitive unit contact process fluids that contain less than 5.0% HRVOC by weight and process fluids that contain HRVOC at 5.0%, or greater, by weight on an annual average basis.</p> <p>Complying with § 115.781(b)(9) = Valves (other than pressure relief, open-ended, and bypass line) are complying with the requirements of § 115.781(b)(9).</p> <p>Pumps with Shaft Seal System = Pumps are equipped with a shaft sealing system that prevents or detects emission of VOC from the seal.</p> <p>Bypass Line Valves = The fugitive unit contains bypass line valves.</p> <p>Compressors with Shaft Seal System = Compressors are equipped with a shaft sealing system that prevents or detects emission of VOC from the seal.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Flanges or Other Connectors = The fugitive unit contains flanges or other connectors.</p> <p>Heat Exchanger Heads, etc. = The fugitive unit contains heat exchanger heads, sight glasses, meters, gauges, sampling connections, bolter manways, hatches, sump covers, junction vent boxes or covers and seals on VOC water separators.</p> <p>Pressure Relief Valves = The fugitive unit contains pressure relief valves.</p> <p>Pump Seals = The fugitive unit contains pump seals.</p> <p>ACR = No bypass line valves are complying with an alternate control requirement.</p> <p>Agitators with Shaft Seal System = No agitators are equipped with a shaft sealing system that prevents or detects emission of VOC from the seal.</p> <p>Complying with § 115.781(b)(9) = Pressure relief valves are complying with the requirements of § 115.781(b)(9).</p>
GRP-FUGS	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	115D-1	<p>Agitators = The fugitive unit does not contain agitators.</p> <p>Components Utilizing Alternative Work Practice in § 115.358 = No components in the fugitive unit are using the alternative work practice under § 115.358.</p> <p>Compressor Seals = The fugitive unit contains compressor seals.</p> <p>Flanges = The fugitive unit contains flanges.</p> <p>Open-ended Valves = The fugitive unit does not contain open-ended valves.</p> <p>Pressure Relief Valves = The fugitive unit contains pressure relief valves.</p> <p>Process Drains = The fugitive unit does not have process drains.</p> <p>Pump Seals = The fugitive unit contains pump seals.</p> <p>Rupture Disks = The fugitive unit has pressure relief valves equipped with rupture disks.</p> <p>Title 30 TAC § 115.352 Applicable = Site is a petroleum refinery, synthetic organic chemical, polymer resin or methyl tert-butyl ether manufacturing process or a natural gas/gasoline processing operation as defined in 30 TAC 115.10.</p> <p>Valves (other than pressure relief and open-ended) = The fugitive unit contains valves other than pressure relief valves or open-ended valves or lines.</p> <p>Alternate Control Requirement = The TCEQ Executive Director has not approved an alternate method for demonstrating and documenting continuous compliance with an alternate control requirement or exemption criteria for compressor seals or no alternate has been requested.</p> <p>Instrumentation Systems = The fugitive unit has instrumentation systems, as defined in 40 CFR § 63.161, that meet 40 CFR § 63.169.</p> <p>Less Than 250 Components at Site = Fugitive unit not located at site with less than 250 fugitive components.</p> <p>Sampling Connection Systems = The fugitive unit has sampling connection systems, as defined in 40 CFR § 63.161, that meet 40 CFR § 63.169.</p> <p>Weight Percent VOC = All components contact a process fluid that contains greater than or equal to 1.0% VOC by weight.</p> <p>50% by Volume = Compressors are not in hydrogen service or are in hydrogen service and the hydrogen content cannot be reasonably expected to always exceed 50% by volume.</p> <p>Complying with § 115.352(1) = Valves are complying with § 115.352(1).</p> <p>Complying with 30 TAC § 115.352(1) = Flanges are complying with the requirements in 30 TAC § 115.352(1).</p> <p>Reciprocating Compressors Or Positive Displacement Pumps = The fugitive unit has reciprocating compressors or positive displacement pumps used in natural gas/gasoline processing operations.</p> <p>Shaft Seal System = Pump seals are equipped with a shaft seal system that prevents or detects emission of VOC from the seal.</p> <p>TVP 0.002 PSIA or Less = The fugitive unit has components or systems that contact a process fluid containing VOC having a true vapor pressure less than or equal to 0.002 psia at 68 degrees Fahrenheit.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Shaft Seal System = Compressors are equipped with a shaft sealing system that prevents or detects emission of VOC from the seal.</p> <p>TVP of Process Fluid VOC \leq 0.044 psia at 68° F = No pressure relief valves contact a process fluid with a TVP of less than or equal to 0.044 psia at 68° F.</p> <p>TVP of Process Fluid VOC \leq 0.044 psia at 68° F = Valves contact a process fluid with a TVP less than or equal to 0.044 psia at 68° F.</p> <p>TVP of Process Fluid VOC \leq 0.044 PSIA AT 68° ° F = Pump seals contact a process fluid containing VOC having a true vapor pressures less than or equal to 0.044 psia at 68 degrees Fahrenheit.</p> <p>Complying with 30 TAC § 115.352(1) = Pump seals are complying with the requirements in 30 TAC § 115.352(1).</p> <p>TVP of Process Fluid VOC \leq 0.044 PSIA AT 68° ° F = Compressor seals do not contact a process fluid containing VOC having a true vapor pressures less than or equal to 0.044 psia at 68 degrees Fahrenheit.</p> <p>TVP of Process Fluid VOC > 0.044 psia at 68° F = Pressure relief valves contact a process fluid with a TVP > 0.044 psia at 68° F.</p> <p>TVP of Process Fluid VOC > 0.044 PSIA AT 68° F = Flanges contact a process fluid containing VOC having a TVP greater than 0.044 psia at 68 degrees Fahrenheit.</p> <p>Complying with § 115.352(1) = Compressor seals are complying with the requirements in 30 TAC § 115.352(1).</p>
GRP-FUGS	40 CFR Part 60, Subpart KKK	60KKK-1	<p>Facility Type = Affected facility is the group of all equipment except compressors within a process unit.</p> <p>Construction/Modification Date = After August 23, 2011.</p>
GRP-FUGS	40 CFR Part 60, Subpart OOOO	60OOOO-1	<p>Construction/Reconstruction/Modification Date = After August 23, 2011, and on or before September 18, 2015.</p> <p>Affected Facility Type = Group of equipment with a process unit, other than a compressor, not subject to 40 CFR Part 60, Subparts VVa, GGG or GGGa.</p>
GRP-TOWERS	40 CFR Part 63, Subpart Q	63Q-1	Used Compounds Containing Chromium on or After September 8, 1994 = The industrial process cooling tower has not used compounds containing chromium on or after September 8, 1994.
GRP-AMINE	30 TAC Chapter 115, Vent Gas Controls	115B-1	<p>Alternate Control Requirement = Alternate control is not used.</p> <p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Control Device Type = Direct flame incinerator in which the vent gas stream is burned at a temperature or at least 1300° F (704 C).</p> <p>Vent Type = Title 30 TAC Chapter 115, Subchapter B, Vent Gas Control rules are applicable and the vent is not specifically classified under the rule.</p>
GRP-AMINE	30 TAC Chapter 115, Vent Gas Controls	115B-2	<p>Alternate Control Requirement = Alternate control is not used.</p> <p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Control Device Type = Smokeless flare</p> <p>Vent Type = Title 30 TAC Chapter 115, Subchapter B, Vent Gas Control rules are applicable and the vent is not specifically classified under the rule.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
GRP-VENTS1	30 TAC Chapter 111, Visible Emissions	111A-1	<p>Alternate Opacity Limitation = Not complying with an alternate opacity limit under 30 TAC § 111.113.</p> <p>Vent Source = The source of the vent is not a steam generator fired by solid fossil fuel, oil or a mixture of oil and gas and is not a catalyst regenerator for a fluid bed catalytic cracking unit.</p> <p>Opacity Monitoring System = Optical instrument capable of measuring the opacity of emissions is not installed in the vent or optical instrumentation does not meet the requirements of § 111.111(a)(1)(D), or the vent stream does not qualify for the exemption in § 111.111(a)(3).</p> <p>Construction Date = After January 31, 1972</p> <p>Effluent Flow Rate = Effluent flow rate is at least 100,000 actual cubic feet per minute.</p>

* - The "unit attributes" or operating conditions that determine what requirements apply.

NSR vs. Title V FOP

The state of Texas has two Air permitting programs, New Source Review (NSR) and Title V Federal Operating Permits. The two programs are substantially different both in intent and permit content.

NSR is a preconstruction permitting program authorized by the Texas Clean Air Act and Title I of the Federal Clean Air Act (FCAA). The processing of these permits is governed by 30 Texas Administrative Code (TAC) Chapter 116.111. The Title V Federal Operating Program is a federal program authorized under Title V of the FCAA that has been delegated to the state of Texas to administer and is governed by 30 TAC Chapter 122. The major differences between the two permitting programs are listed in the table below:

NSR Permit	Federal Operating Permit (FOP)
Issued Prior to new Construction or modification of an existing facility	For initial permit with application shield, can be issued after operation commences; significant revisions require approval prior to operation.
Authorizes air emissions	Codifies existing applicable requirements, does not authorize new emissions
Ensures issued permits are protective of the environment and human health by conducting a health effects review and that requirement for best available control technology (BACT) is implemented.	Applicable requirements listed in permit are used by the inspectors to ensure proper operation of the site as authorized. Ensures that adequate monitoring is in place to allow compliance determination with the FOP.
Up to two Public notices may be required. Opportunity for public comment and contested case hearings for some authorizations.	One public notice required. Opportunity for public comments. No contested case hearings.
Applies to all point source emissions in the state.	Applies to all major sources and some non-major sources identified by the EPA.
Applies to facilities: a portion of site or individual emission sources	One or multiple FOPs cover the entire site (consists of multiple facilities)
Permits include terms and conditions under which the applicant must construct and operate its various equipment and processes on a facility basis.	Permits include terms and conditions that specify the general operational requirements of the site; and also include codification of all applicable requirements for emission units at the site.
Opportunity for EPA review for Federal Prevention of Significant Deterioration (PSD) and Nonattainment (NA) permits for major sources.	Opportunity for EPA review, Affected states review, and a Public petition period for every FOP.
Permits have a table listing maximum emission limits for pollutants	Permit has an applicable requirements table and Periodic Monitoring (PM) / Compliance Assurance Monitoring (CAM) tables which document applicable monitoring requirements.
Permits can be altered or amended upon application by company. Permits must be issued before construction or modification of facilities can begin.	Permits can be revised through several revision processes, which provide for different levels of public notice and opportunity to comment. Changes that would be significant revisions require that a revised permit be issued before those changes can be operated.
NSR permits are issued independent of FOP requirements.	FOPs are independent of NSR permits, but contain a list of all NSR permits incorporated by reference

New Source Review Requirements

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room, located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. In addition, many of the permits are accessible online through the link provided below. The Public Education Program may be contacted at 1-800-687-4040 or the Air Permits Division (APD) may be contacted at 1-512-239-1250 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. Permit by Rule (PBR) registrations submitted by permittees are also available online through the link provided below. The following table specifies the PBRs that apply to the site.

The TCEQ has interpreted the emission limits prescribed in 30 TAC §106.4(a) as both emission thresholds and default emission limits. The emission limits in 30 TAC §106.4(a) are all considered applicable to each facility as a threshold matter to ensure that the owner/operator qualifies for the PBR authorization. Those same emission limits are also the default emission limits if the specific PBR does not further limit emissions or there is no lower, certified emission limit claimed by the owner/operator.

This interpretation is consistent with how TCEQ has historically determined compliance with the emission limits prior to the addition of the “as applicable” language. The “as applicable” language was added in 2014 as part of changes to the sentence structure in a rulemaking that made other changes to address greenhouse gases and was not intended as a substantive rule change. This interpretation also provides for effective and practical enforcement of 30 TAC §106.4(a), since for the TCEQ to effectively enforce the emission limits in 30 TAC §106.4(a) as emission thresholds, all emission limits must apply. As provided by 30 TAC §106.4(a)(2) and (3), an owner/operator shall not claim a PBR authorization if the facility is subject to major New Source Review. The practical and legal effect of the language in 30 TAC § 106.4 is that if a facility does not emit a pollutant, then the potential to emit for that particular pollutant is zero, and thus, the facility is not authorized to emit the pollutant pursuant to the PBR.

The status of air permits, applications, and PBR registrations may be found by performing the appropriate search of the databases located at the following website:

www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

Details on how to search the databases are available in the **Obtaining Permit Documents** section below.

New Source Review Authorization References

Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 93813	Issuance Date: 11/13/2018
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.264	Version No./Date: 09/04/2000
Number: 106.359	Version No./Date: 09/10/2013
Number: 106.511	Version No./Date: 09/04/2000

Emission Units and Emission Points

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sand-blasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the "Maximum Allowable Emission Rate Table", or "MAERT" for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

Monitoring Sufficiency

Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).

With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected

Compliance Assurance Monitoring (CAM):

Compliance Assurance Monitoring (CAM) is a federal monitoring program established under Title 40 Code of Federal Regulations Part 64 (40 CFR Part 64).

Emission units are subject to CAM requirements if they meet the following criteria:

1. the emission unit is subject to an emission limitation or standard for an air pollutant (or surrogate thereof) in an applicable requirement;
2. the emission unit uses a control device to achieve compliance with the emission limitation or standard specified in the applicable requirement; and
3. the emission unit has the pre-control device potential to emit greater than or equal to the amount in tons per year for a site to be classified as a major source.

The following table(s) identify the emission unit(s) that are subject to CAM:

Unit/Group/Process Information	
ID No.: GRP-AMINE	
Control Device ID No.: GRP-VENTS1	Control Device Type: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.122(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: The minimum combustion temperature shall not be below 1300 degrees F.	
Basis of CAM: It is widely practiced and accepted to use performance tests, manufacturer's recommendations, engineering calculations and/or historical data to establish a minimum temperature for thermal incinerators. This minimum temperature must be maintained in order for the proper destruction efficiency. Operation below the minimum combustion temperature will result in incomplete combustion and potential noncompliance with emission limitations and/or standards. The monitoring of the combustion temperature of a thermal incinerator is commonly required in federal and state rules, including: 40 CFR Part 60, Subparts III, NNN, QQQ, and RRR; 40 CFR Part 61, Subparts BB and FF; 40 CFR Part 63, Subparts G, R, DD, EE, and HH; and 30 TAC Chapter 115.	

Unit/Group/Process Information	
ID No.: GRP-AMINE	
Control Device ID No.: 1SK25.001	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: 115B-2
Pollutant: VOC	Main Standard: § 115.122(a)(1)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: No pilot flame.	
<p>Basis of CAM: It is widely practiced and accepted to monitor the flare pilot flame by closed circuit cameras, thermocouples and visual inspection. The presence of the pilot flame demonstrates that VOC emissions are combusted. Monitoring the presence of a pilot flame is required in many federal rules, including: 40 CFR Part 60, Subparts K, III, NNN, QQQ, and RRR; 40 CFR Part 61, Subparts BB and FF; and 40 CFR Part 63, Subparts G, R, W, DD, and HH.</p>	

Unit/Group/Process Information	
ID No.: GRP-OILHTRS	
Control Device ID No.: 1HR15	Control Device Type: Selective Catalytic Reduction (SCR)
Control Device ID No.: 2HR15	Control Device Type: Selective Catalytic Reduction (SCR)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 116, NSR Permits	SOP Index No.: N/A
Pollutant: NO _x	Main Standard: 93813
Monitoring Information	
Indicator: Nitrogen Oxides Concentration	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: For boiler 1HR15.001, maximum NO _x concentration shall not exceed 3.38 lbs/hr. For boiler 2HR15.002, maximum NO _x concentration shall not exceed 3.33 lbs/hr.	
Basis of CAM: It is widely practiced and accepted to calibrate and use a portable analyzer or NO _x CEMS/PEMS to measure NO _x concentration with procedures such as EPA Test Method 7. The measured concentration along with stack flow rate or AP-42 factors and fuel consumption records may be used to demonstrate compliance with an underlying emission limit or standard. Additionally, measuring the NO _x concentration is provided as a monitoring option for any control device because an increase in NO _x concentration may be indicative of the control device performance. Outlet NO _x concentration has been used as an indicator in many federal and state rules.	

Periodic Monitoring:

The Federal Clean Air Act requires that each federal operating permit include monitoring sufficient to assure compliance with the terms and conditions of the permit. Most of the emission limits and standards applicable to emission units at Title V sources include adequate monitoring to show that the units meet the limits and standards. For those requirements that do not include monitoring, or where the monitoring is not sufficient to assure compliance, the federal operating permit must include such monitoring for the emission units affected. The following emission units are subject to periodic monitoring requirements because the emission units are subject to an emission limitation or standard for an air pollutant (or surrogate thereof) in an applicable requirement that does not already require monitoring, or the monitoring for the applicable requirement is not sufficient to assure compliance:

Unit/Group/Process Information	
ID No.: GRP-VENTS1	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111A-1
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per month	
Averaging Period: Six-minutes	
Deviation Limit: Maximum opacity limit shall not exceed 15%.	
<p>Basis of monitoring: The option to perform opacity readings or visible emissions to demonstrate compliance is consistent with EPA Reference Test Method 9 and 22. Opacity and visible emissions have been used as an indicator of particulate emissions in many federal rules including 40 CFR Part 60, Subpart F and Subpart HH. In addition, use of these indicators is consistent with the EPA's "Compliance Assurance Monitoring (CAM) Technical Guidance Document" (August 1998). Monitoring specifications and procedures for the opacity are consistent with federal requirements and include the EPA's Test Method 9 for determining opacity by visual observations and the requirements of 40 CFR § 60.13 for a continuous opacity monitoring system (COMS). The monitoring specifications and procedures for the visible emissions monitoring are similar to "EPA Reference Method 22" procedures.</p>	

Obtaining Permit Documents

The New Source Review Authorization References table in the FOP specifies all NSR authorizations that apply at the permit area covered by the FOP. Individual NSR permitting files are located in the TCEQ Central File Room (TCEQ Main Campus located at 12100 Park 35 Circle, Austin, Texas, 78753, Building E, Room 103). They can also be obtained electronically from TCEQ's Central File Room Online (<https://www.tceq.texas.gov/goto/cfr-online>). Guidance documents that describe how to search electronic records, including Permits by Rule (PBRs) or NSR permits incorporated by reference into an FOP, archived in the Central File Room server are available at https://www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

All current PBRs are contained in Chapter 106 and can be viewed at the following website:

https://www.tceq.texas.gov/permitting/air/permitbyrule/air_pbr_index.html

Previous versions of 30 TAC Chapter 106 PBRs may be viewed at the following website:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html

Historical Standard Exemption lists may be viewed at the following website:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

Additional information concerning PBRs is available on the TCEQ website:

https://www.tceq.texas.gov/permitting/air/nav/air_pbr.html

Compliance Review

1. In accordance with 30 TAC Chapter 60, the compliance history was reviewed on 05/24/2019.

Site rating: 21.84 / Satisfactory Company rating: 17.37 / Satisfactory

(High < 0.10; Satisfactory ≥ 0.10 and ≤ 55; Unsatisfactory > 55)

2. Has the permit changed on the basis of the compliance history or site/company rating?No

Site/Permit Area Compliance Status Review

1. Were there any out-of-compliance units listed on Form OP-ACPS?No

2. Is a compliance plan and schedule included in the permit?No

Available Unit Attribute Forms

OP-UA1 - Miscellaneous and Generic Unit Attributes

OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes

OP-UA3 - Storage Tank/Vessel Attributes

OP-UA4 - Loading/Unloading Operations Attributes

OP-UA5 - Process Heater/Furnace Attributes

OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes

OP-UA7 - Flare Attributes

OP-UA8 - Coal Preparation Plant Attributes

OP-UA9 - Nonmetallic Mineral Process Plant Attributes

OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes

OP-UA11 - Stationary Turbine Attributes

OP-UA12 - Fugitive Emission Unit Attributes

OP-UA13 - Industrial Process Cooling Tower Attributes

OP-UA14 - Water Separator Attributes

OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes

OP-UA16 - Solvent Degreasing Machine Attributes

OP-UA17 - Distillation Unit Attributes

OP-UA18 - Surface Coating Operations Attributes

OP-UA19 - Wastewater Unit Attributes
OP-UA20 - Asphalt Operations Attributes
OP-UA21 - Grain Elevator Attributes
OP-UA22 - Printing Attributes
OP-UA24 - Wool Fiberglass Insulation Manufacturing Plant Attributes
OP-UA25 - Synthetic Fiber Production Attributes
OP-UA26 - Electroplating and Anodizing Unit Attributes
OP-UA27 - Nitric Acid Manufacturing Attributes
OP-UA28 - Polymer Manufacturing Attributes
OP-UA29 - Glass Manufacturing Unit Attributes
OP-UA30 - Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill Attributes
OP-UA31 - Lead Smelting Attributes
OP-UA32 - Copper and Zinc Smelting/Brass and Bronze Production Attributes
OP-UA33 - Metallic Mineral Processing Plant Attributes
OP-UA34 - Pharmaceutical Manufacturing
OP-UA35 - Incinerator Attributes
OP-UA36 - Steel Plant Unit Attributes
OP-UA37 - Basic Oxygen Process Furnace Unit Attributes
OP-UA38 - Lead-Acid Battery Manufacturing Plant Attributes
OP-UA39 - Sterilization Source Attributes
OP-UA40 - Ferroalloy Production Facility Attributes
OP-UA41 - Dry Cleaning Facility Attributes
OP-UA42 - Phosphate Fertilizer Manufacturing Attributes
OP-UA43 - Sulfuric Acid Production Attributes
OP-UA44 - Municipal Solid Waste Landfill/Waste Disposal Site Attributes
OP-UA45 - Surface Impoundment Attributes
OP-UA46 - Epoxy Resins and Non-Nylon Polyamides Production Attributes
OP-UA47 - Ship Building and Ship Repair Unit Attributes
OP-UA48 - Air Oxidation Unit Process Attributes
OP-UA49 - Vacuum-Producing System Attributes
OP-UA50 - Fluid Catalytic Cracking Unit Catalyst Regenerator/Fuel Gas Combustion Device/Claus Sulfur Recovery Plant Attributes
OP-UA51 - Dryer/Kiln/Oven Attributes
OP-UA52 - Closed Vent Systems and Control Devices
OP-UA53 - Beryllium Processing Attributes
OP-UA54 - Mercury Chlor-Alkali Cell Attributes
OP-UA55 - Transfer System Attributes
OP-UA56 - Vinyl Chloride Process Attributes
OP-UA57 - Cleaning/Depainting Operation Attributes
OP-UA58 - Treatment Process Attributes
OP-UA59 - Coke By-Product Recovery Plant Attributes
OP-UA60 - Chemical Manufacturing Process Unit Attributes
OP-UA61 - Pulp, Paper, or Paperboard Producing Process Attributes
OP-UA62 - Glycol Dehydration Unit Attributes
OP-UA63 - Vegetable Oil Production Attributes